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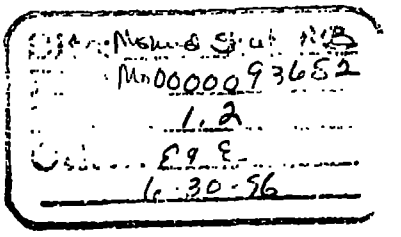


MEMORANDUM

TO: Paul Doherty, EPA/DPO

FROM: Randy Schademann, E & E/STM RS

THRU: Hieu Q. Vu, E & E/START PM HQV

DATE: June 30, 1996

SUBJECT: Trip Report, Site Investigation Assessment at the Mound Street PCB Site, St. Louis, Missouri
TDD: S07-9602-047
PAN: 0076MGSCXX

INTRODUCTION

The Ecology and Environment, Inc. (E & E), Superfund Technical Assessment and Response Team (START) was tasked by the U.S. Environmental Protection Agency (EPA) Region VII Site Assessment and Cost Recovery (SACR) Branch to assist Sverdrup Environmental, Inc.--an EPA Region VII Superfund Alternative Remedial Contracting Strategy (ARCS) contractor--with implementing a remedial sampling plan. The sampling plan outlined the procedures and locations for the collection of soil and ground water samples, which would assist with the determination of whether off-site migration of contaminants had occurred. START supplied a Geoprobe sampler and three STM members (STMs) to assist with sample collection. STM Randy Schademann was assigned as project manager for the Mound Street PCB site.

SITE LOCATION, DESCRIPTION and HISTORY

The 1.5-acre Mound Street PCB site is located in the city of St. Louis, Missouri, at the eastern end of Mound Street near the intersection of Mound Street and First Street (Attachment 1). Because of the limited scope of START's activities in this project, readers are referred to Sverdrup's field sampling plan (Reference 1) and reports prepared by E & E under the EPA Field Investigation Team (FIT) contract (References 2 and 3) for a more detailed review of the site's description and history. Briefly, the Mound Street PCB site occupies a portion of the location of the Laclede Gas and Light Company former manufactured gas plant. Coal gas manufacturing was discontinued in 1945, but the facility remained a site for power generation and transmission until 1973. From 1985 to 1989 the Mound Street site was used for an electric motor stripping operation. In 1989, a fire occurred in site's only structure. The building was subsequently demolished in 1991. The property does not currently have any structures and is vacant.

A number of investigations have been conducted that have addressed the presence of oil in the basement of the now-demolished building. Samples collected in 1987 by the St. Louis City Division of Health and by the E & E/FIT were analyzed for polychlorinated biphenyls (PCBs). No samples from those two events contained PCBs. On July 8, 1993, the St. Louis Metropolitan Sewer District (MSD) collected a water sample that contained oil from a stormwater pump station located approximately 400 feet north of the site. A PCB concentration of 47 milligrams per liter (mg/L) was detected in the sample.

During the course of investigating the potential source of PCB contamination in the pump station, a 12,000-gallon underground storage tank (UST) was discovered approximately 100 feet north of the site. The tank's contents were found to contain PCBs and were removed in August 1993.

The Missouri Department of Natural Resources (MDNR) completed a Preliminary Assessment (PA) in March 1994. MDNR concluded, through the PA, that the site posed a threat of a release to the Mississippi River.

FIELD ACTIVITIES

On April 1, 1996, STM Scott Hayes met with a Union Electric Company representative to locate buried electric lines near the site. All other utility companies had indicated by telephone that the area was clear of their respective service lines.

On April 2 and 3, 1996, STMs Schademann, Hayes, and Andy Mazzeo utilized a Geoprobe to collect four soil samples. The samples were collected between 17 and 27 feet below ground surface (BGS). Each of the samples was collected with Geoprobe's large-bore sampler fitted with acetate sleeves. The soil representing each sample was provided to Sverdrup's Michael McCurdy and Michael May, who placed the material from each sample into two 8-ounce glass jars and two 40-milliliter vials for analysis of PCBs, semi-volatiles and volatile organics by the EPA Region VII Laboratory, Kansas City, Kansas. Sampling locations are depicted on Attachment 2.

Debris from the demolition of the on-site building was found strewn over the surface of the site. Subsurface rubble was encountered at all Geoprobe points located west of the gravel road (Points 1 through 5, Attachment 2). Solid refusal was encountered by the Geoprobe at depths ranging between 15 to 19 feet BGS at points 1, 2 and 5 (see Attachment 1). At point 2, a soil sample (101) was collected at 17 to 19 feet BGS. Five separate attempts at point 3 resulted in refusal at depths ranging between 4 and 16 feet BGS (each attempt was offset by 1 to 3 feet). At point 4, a 3-inch core of concrete was recovered from a depth of 10 to 12 feet BGS, with solid refusal then occurring at 12 feet BGS. The material was not retained for analyses. No refusal was encountered at points 6, 7 and 8. Samples were collected from each of the three points: sample 102 from 18 to 20 feet and 103 from 25 to 27 feet BGS at point 6, sample 100 and 100D (a duplicate) from point 7 at 25 to 27 feet BGS, and sample 104 from 25 to 27 feet BGS at point 8. At each location, the boreholes were filled with bentonite.

Because ground water could not be reached with the Geoprobe in the area of the site west of the gravel road (where the building had stood), ground water samples were collected from two existing monitoring wells (Attachment 2). For each sample, four 80-ounce amber jugs and two 40-ml vials were filled for analyses of the same parameters for the soil samples. Duplicate samples were collected from the southernmost well. For each sample the ground water was lifted to the surface through polyethylene tubing using a peristaltic pump. Depth to ground water at each location was approximately 30 feet BGS.

SUMMARY

START assisted Sverdrup, an EPA Region VII ARCS contractor, with the collection of soil and ground water samples at the Mound Street PCB site. Analytical results will be used by the ARCS contractor and the EPA to assess whether off-site migration of contaminants related to the site has occurred.

REFERENCES

1. Sverdrup Corporation, Inc., ARCS, March 4, 1996. Mound Street PCB site, Field Sampling Plan, submitted to U.S. EPA Region VII, Kansas City, Kansas.

2. Ecology and Environment, Inc., Field Investigation Team, October 29, 1991. Laclede Coal Gas site, Screening Site Inspection Report, submitted to U.S. EPA Region VII, Kansas City, Kansas.

3. Ecology and Environment, Inc., Field Investigation Team, June 23, 1988. Mound Street Power Plant site, Preliminary Assessment, submitted to U.S. EPA Region VII, Kansas City, Kansas.

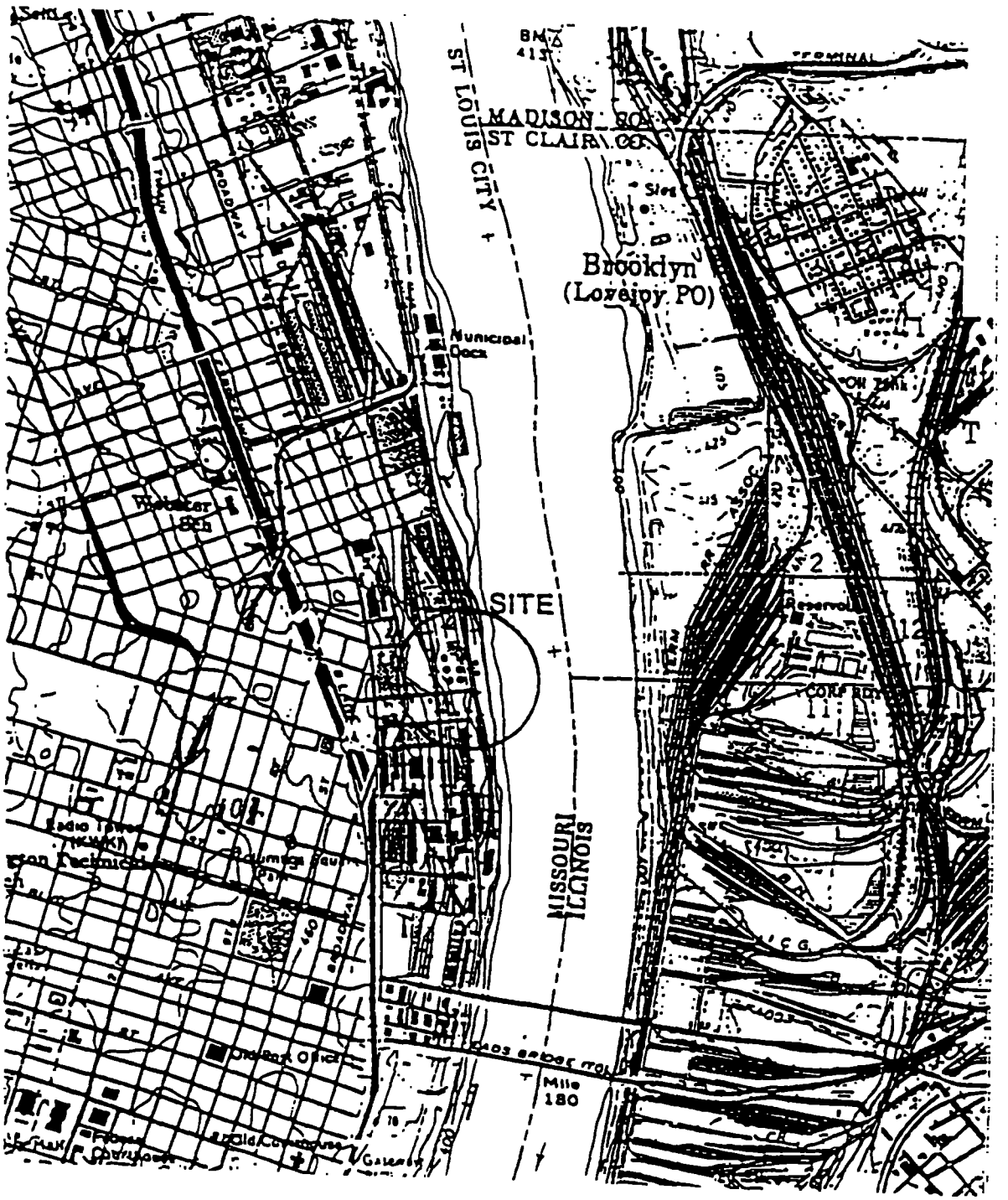
ATTACHMENTS

1. Site Location Map (from Sverdrup's Field Sampling Plan)

2. Sample Location Map (Prepared by Sverdrup)

ATTACHMENT 1

SITE LOCATION MAP



Source: U.S. Geological Survey (USGS). 1954. Granite City, Illinois (photorevised 1974). 7.5 Minute Series Topographic Map.

Project No.: 010865-370303	Mound Street PCB Site St. Louis, Missouri	Site Location Map	Figure No.: 1
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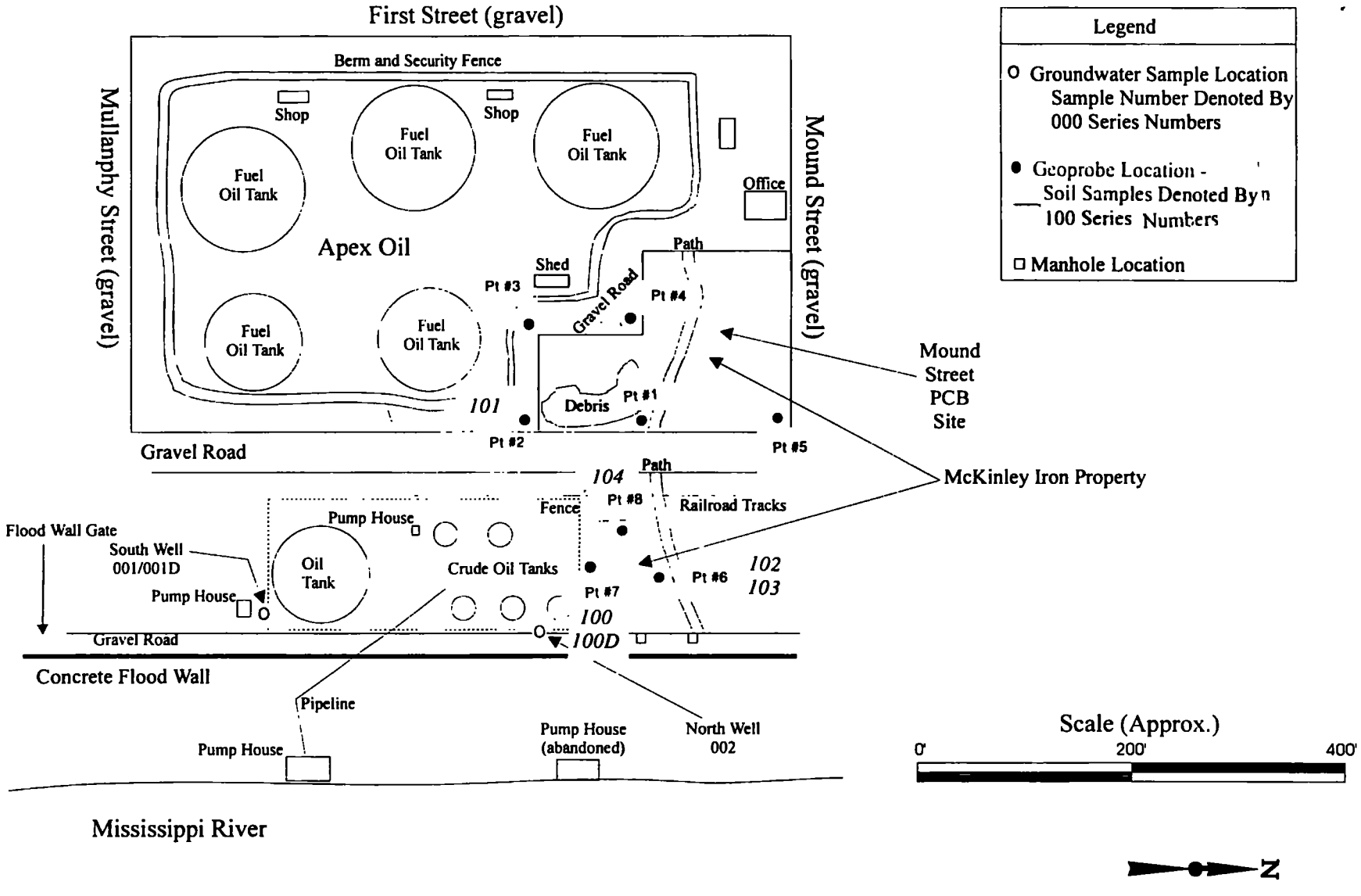
ATTACHMENT 2

SAMPLE LOCATION MAP



Sources: E&E/FIT 1991. SSI Laclede Coal Gas Site, St. Louis, Missouri. MDNR 1994 PA Mound Street PCB Site.	Project No.: 010865-370303	Mound Street PCB Site St. Louis, Missouri	Site Location Map	Figure No.: 1
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